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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/598,399

**Applicant(s)**

NILSSON ET AL.

**Examiner**

THIEN T. MAI

**Art Unit**

2887

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 August 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-10,12-18 and 20-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-10,12-18 and 20-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 7/27/10, 8/10/10
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## ***DETAILED ACTION***

### ***Acknowledgement***

1. Acknowledgement is hereby made of the claim amendment filed 8/18/2010.

### ***Objections***

2. Claim 1 line 13, claim 3 line 2: "the memory" lacks antecedent basis.
3. Claim 1 line 10+: it is unclear as to how receiving "information about a new authorization code" in the controller of the claimed handheld device is to "replace an old authorization code from a central unit..."
4. Claims 1, 12: please delete or replace "is to" with "is configured to".
5. Claims 9, 14, 22: please delete or replace "can be" with "is" since "can be" refers to a possibility therefore indefinite.
6. Claim 10: "said information" lacks antecedent basis. Parent claim 9 also recites "information".

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Art Unit: 2887

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 3-9, 13-18, 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teicher et al. (US 5933813 A, *Teicher'813* hereinafter).

Re claims 1, 9, 16, 18, *Teicher'813* discloses a handheld device having at least a category id as an authorization code assigned to a respective function of an individual or group, i.e. (senior, frequent shopper, military, manager) such that a label when receiving a command with matching authorization code, it displays information such as price and discounts programmed particularly for the sent authorization code. *Teicher'813*, Figs. 11-27, col. 2 lines 16-34, col. 10 lines 3-49, col. 11-15. Information including price and message may be transmitted from the central computer (CC) to the labels as well as the handheld devices 402. *Teicher'813*, Figs. 21-26. A handheld device may include at least a register for storing an authentication code (message ID) 381 (Fig. 19) or multiple message IDs for the store manager to program different labels (Fig. 20). To program a new authorization code (message ID), the central computer sends a command addressed to handheld device. If the addresses match, the code is entered into the addressed register of the handheld device. (*Teicher'813*, Fig. 26).

*Teicher*'813 is silent to the handheld device receiving a new authorization code to replace an old code.

However, as discussed, *Teicher*'813 teaches the handheld device can be programmed with a new code.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to program the new code to replace old code that was assigned to a previous customer that has already finished shopping for the day so that the handheld device can be used again without having provide a handheld device with fixed code for everyone and a storage to keep all of them.

Re claim 3, the handheld device has a unique identification regarding the user (i.e. claim 18, Figs. 19-20).

Re claim 4, 13, the receiver is arranged for wireless communication, and wherein the wireless communication includes as IR communication, RF communication, or both (Figs. 11-27, col. 2 lines 16-34, col. 10 lines 3-49, col. 11-15).

Re claim 5, 14, essentially the same type of controller control circuit and/or receiver as the electronic labels used in the electronic labelling system (i.e. both use processors).

Re claim 6, the transmitter is arranged to transmit to the label a command to display a certain piece of information comprised in a register in the label (Figs. 11-27, col. 2 lines 16-34, col. 10 lines 3-49, col. 11-15).

Re claim 7, the transmitter is arranged to transmit to the label a command to change information comprised in a register in the label (Figs. 11-27, col. 2 lines 16-34, col. 10 lines 3-49, col. 11-15).

Re claim 8, a display for displaying information to a holder of the handheld display (Figs. 11-27, col. 2 lines 16-34, col. 10 lines 3-49, col. 11-15).

Re claim 15, the central unit includes a master authorization code that can be enabled in the system to give access to all information comprised on the electronic shelf labels (Figs. 11-27, col. 2 lines 16-34, col. 10 lines 3-49, col. 11-15, i.e. manager ID code).

Re claim 17, a stored master authorization code, wherein the control unit is arranged to display the information contained in the register if the received authorization code matches the stored master authorization code (Figs. 11-27, col. 2 lines 16-34, col. 10 lines 3-49, col. 11-15, i.e. manager ID code).

Re claim 20, the handheld device and the electronic shelf label system are adapted to communicate by wireless communication (Figs. 11-27, col. 2 lines 16-34, col. 10 lines 3-49, col. 11-15).

Re claim 21, the handheld device and the at least one electronic shelf label comprise essentially the same type of control unit and/or receiver (i.e. both use processors, Figs. 11-27, col. 2 lines 16-34, col. 10 lines 3-49, col. 11-15).

Re claims 22-23, the controller after receiving the authorization code sets a type of function when the user of the universal handheld device presses a selected button causing a respective message ID to be sent (i.e. Fig. 20, 27). Note that the "or" statement requires only one type of function.

Re claim 24, the controller authorizes functions using the authorization code from the central unit (Figs. 11-27, col. 2 lines 16-34, col. 10 lines 3-49, col. 11-15).

Re claim 25, the master authorization code when in the handheld device authorizes complete access at a personnel level (Figs. 11-27, col. 2 lines 16-34, col. 10 lines 3-49, col. 11-15, i.e. manager ID code).

8. Claims 10, 12 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Teicher et al. (US 5933813 A, *Teicher'813* hereinafter) in view of *Teicher et al.* (US 5880449 A, *Teicher'499* hereinafter). *Teicher'813*'s teachings have been discussed above.

Re claims 10, 12, *Teicher'813* does not disclose the central unit is to receive from the at least one handheld device information regarding a unique identity of the handheld device to enable selection of information to communicate to the handheld device dependent on said unique identity

*Teicher'499* discloses an electronic shelf label system in which the communication means connected to the central unit are arranged to receive from the at least one handheld device information regarding a unique identity (i.e. from register 58) of the handheld device and communicate this information to the central unit, to enable selection of information to communicate to the handheld device in dependence of said unique identity (*Teicher et al.*, col. 4 line 65-col. 5 line 2, col. 5 lines 16-22, col. 6 lines 10-21, col. 8 lines 15-28, col. 9 line 63-col. 10 line 5: the central unit 12 receives identity of handheld device 22 through check-in unit 16 and then selects a subset of record of price reduction list 70 for transmission to the device 22).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify *Gelbman* and assign an identity to each handheld device for communicating to the central unit as taught in *Teicher'499*.

One of ordinary skill in the art would be motivated to employ the teachings of *Teicher'499* since they would enable the central unit selecting a subset of records, rather than the entire database, to the identified handheld unit that is to communicate with a certain group of shelf labels for performing functions including price verification or updating. Furthermore, by receiving the identity of the specific handheld device that needs information from the central unit, the need to transmit or broadcast information from the central unit to other devices that do

not need such information is eliminated thereby at least saving energy in the transmission and receiving.

9. Claims 1, 3-10, 13-15, 18, 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Gelbman* (US 20020167500 A1) in view of *Goodwin, III* (US 20020139847 A1, *Goodwin* hereinafter).

Re claim 1, *Gelbman* discloses a handheld device (interpreted as activator module 18; paragraphs 45, 53, 86, 102: activator module 18 can be in the form of a pocket-sized, handheld, portable device) for use with an electronic labelling system 10 for communicating with at least one label used in the electronic labelling system, said handheld device comprising

transmitter 38 for transmitting a command to at least one shelf label (as label 16) in a electronic labelling system memory 28 (Figs. 2-3, 8A, 8B, 9, paragraphs 46, 47, 51, 71, 87, 94: memory means 28 of label 16, once receiving a command signal 20 from the transmission means 38 of device 18, stores new information such as instructions, sales price),

controller (processor 34) to control the function of the handheld device (Fig. 3, paragraphs 46, 47, 51, 53: processor 34 is configured to control a signal receiving function of receiver 36 and a transmitting function of transmitter 38), and

at least one button for providing user input (paragraphs 45, 53, 86, 102: activator module 18 can be formed as part of phone, keyboard, keypad, PDA, Palm Pilot having at least a button for receiving a user input),

said handheld device 18 also comprising a receiver controllable by the controller and arranged to receive information from a central unit in the electronic labelling system (Figs. 3, 6, paragraphs 45, 53: device 18 includes a receiver 36 configured to receive information from a wired or radio-based central control unit 70, 72, 74).



*Gelbman* does not disclose the transmitter is arranged to transmit an authorization code to the label in order to verify the authorization to transmit said command.

*Goodwin* discloses a handheld device 34 that includes a keypad 68 for entering a password as an authorization code for transmission by transmission means 62 to shelf label 22 (*Goodwin*, paragraphs 26, 27, 37, 39). Upon receiving the password, control circuit 50 of the label verifies that the password is correct before loading the contents of secondary data location 56 into display 52 (*Goodwin*, paragraphs 42-49), which inherently implies that the command from the handheld device to display the contents 56 is authorized by providing the correct password.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of *Goodwin, III* by instructing the control unit comparing a stored password in the label with a manually sent password.

One of ordinary skill in the art would be motivated to employ the teachings of *Goodwin* since they would further enhance the security of information stored in the label by requiring the password to be entered by the handheld device user when information in the registers are accessed. This is preferable over the encryption keys of *Gelbman* since an unauthorized user could use the handheld device in *Gelbman* to send an encrypted command and access the registers in the label since a password may be used to generate an encryption key but is not needed to send a command.

*Gelbman* does not disclose the receiver is arranged to receive information about a new authorization code matching an authorization code in at least one shelf label to replace an old authorization code from a central unit in the electronic labeling system.

However, *Gelbman* discloses that the handheld device 18 is also configured to transmit software programs and instructions to the storage element 28 of label 16 and the storage

element 28 is configured to store encryption software and authorization code in the form of encryption keys, security code in order to authenticate the commands (*Gelbman*, paragraphs 46, 47, 51, 53, 71, 74, 87, 99). The device 18 is further configured to receive an instruction from the main controller or remote devices 70-74 shown in Fig. 7 to perform a function such as changing or updating the display of the label (*Gelbman*, paragraphs 53, 74). The device 18 is part of a distributed processing and control system to provide instructions software programs for use by the label (paragraphs 46, 51, 53, 47, 87) and reports to the central unit of the control system (paragraphs 53, 86). *Gelbman* further discloses a central unit 540 in a retailer location (Fig. 9) is configured to provide all or subset of information to the labels and scanner at the check-out (*Gelbman*, paragraphs 92-94). The Examiner further recognizes that *Goodwin* teaches the password has been stored in the portable device in order to authenticate and comparing with a password entered by the personnel.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the central unit is the main source of information for the labels as well as the central controller for controlling the device 18 and labels 16. It would have further been obvious that the encryption software, programs, and security code in the handheld device 18 come from the central unit since handheld devices are well known to have limited memory capacity and all the software programs stored in the handheld device 18 are developed externally and downloaded from external source. It would have further been obvious that the central unit of the retail establishment provides all software programs for the hand-held device to program the shelf labels in order to further enhance the security of information stored in the labels (i.e. in case the handheld device is lost, broken, or stolen) by directly or indirectly re-programming the labels with new authorization code.

Re claim 3, a handheld device according to claim 1, comprising unique identity information stored in the memory means and transmission means for communicating said unique identity information to the system (paragraphs 46, 107: label identification data stored the device 18 is transmitted to the label in the labeling system).

Re claim 4, a handheld device according to claim 1, arranged for wireless communication such as IR communication or RF communication (Fig. 2-3, paragraph 46: label 16 includes an antenna 22 for radio wireless communication with handheld device 18; Fig. 6, paragraph 45, 53: device 18 communicates via radio frequency with computer 70).

Re claim 5, a handheld device according to claim 1, comprising essentially the same type of control circuit and/or receiver as the electronic labels used in the electronic labelling system (Figs. 2, 3, 5, paragraphs 51, 71: device 18 has control circuit 34 and receiver 36 or combined to form a transceiver, which is essentially the same as label 16 comprises control circuit 24 and receiver; here, both control circuits 34 and 24 are processors therefore are of the same type).

Re claim 6, a handheld device according to claim 1, arranged to transmit to the label a command to display a certain piece of information comprised in a register in the label (paragraphs 46-47: device transmit command to storage 28 of the label 16 with information including price and product code for storage in a location as a register of the memory);.

Re claim 7, a handheld device according to claim 1, arranged to transmit to the label a command to change information comprised in a register in the label (abstract, paragraphs 46-47, 51, 66, 74, 77, 86: device 18 is configured to transmit an update command to alter information in the label).

Re claim 8, a handheld device including a display for displaying information to a holder of the handheld display (paragraphs 45, 53, 86, 102: activator module 18 can be part of phone,

PDA, Palm Pilot inherently well known to have a display for at least displaying a status information).

Re claim 9, see discussion regarding claim 1 above.

Re claim 10, an electronic shelf label system according to claim 9, which is arranged to receive in the central unit information transmitted from said at least one handheld device 18 and process said information in the central unit (*Gelbman*, paragraphs 53, 86: handheld device 18 communicates back to central unit via the communication means for processing).

Re claim 13, an electronic shelf label system according to claim 10, wherein the handheld device and the electronic shelf labelling system are arranged for wireless communication such as IR communication or RF communication (Fig. 2-3, 5, 6, paragraphs 45-46, 55, 70, 86, 92: handheld device 18 and labels communicate wirelessly through antennas, central unit 540, 70, 72, 74 also communicates wirelessly with the labels and/or handheld device 18).

Re claim 14, an electronic shelf label system according to claim 10, wherein the handheld device comprises essentially the same type of control circuit and/or receiver as the shelf labels used in the electronic labelling system (*Gelbman*, Figs. 2, 3, 5, paragraphs 33, 48: device 18 has control circuit 34 and receiver 36 or combined to form a transceiver, which is essentially the same as label 16 comprises control circuit 24 and receiver; here, both control circuits 34 and 24 are processors therefore are of the same type).

Re claim 15, 25, *Gelbman* discloses an electronic shelf label system according to claim 10, comprising a master authorization code that can be enabled in the system to give access to all information comprised on the electronic shelf labels (*Gelbman*, paragraphs 46, 47, 99, 122, 107, 124, 127, 134, 137: each of the labels receives at least a master encryption key or master security code from the handheld device as a master device for use in authentication of

commands for accessing all information on the labels). The password taught in *Goodwin* is also considered as the master authorization code

Re claim 18, see discussion regarding claim 1 above.

Re claim 20, a method according to claim 18, wherein the handheld device and the electronic shelf label system communicate by wireless communication such as IR or RF communication (Fig. 2-3, paragraph 46: label 16 includes an antenna 22 for radio wireless communication with handheld device 18; Fig. 6, paragraph 45, 53: device 18 communicates via radio frequency with computer 70).

Re claim 21, a method according to claim 18, wherein the handheld device and the at least one electronic shelf label comprise essentially the same type of control unit and/or receiver (Figs. 2, 3, 5, paragraphs 33, 48: device 18 has control circuit 34 and receiver 36 or combined to form a transceiver, which is essentially the same as label 16 comprises control circuit 24 and receiver; here, both control circuits 34 and 24 are processors therefore are of the same type).

Re claim 22-23, *Gelbman* as modified by *Goodwin* discloses the controller receives the information and sets a type of function (i.e. personnel function) that can be performed using the information (*Gelbman*, paragraph 51: controller 18 receives information including commands, instructions, software, and parameters...; the controller sets a personnel function for the personnel to send to the label the same information; note that in the information about the authorization code is interpreted as **any** information related to and including the authorization code; *Goodwin* also teaches the controller sets a personnel function when a personnel keys in the proper password before sending a price change command).

Re claim 24, as discussed above, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the security software and code originate from the

central control computer so that the handheld controller can not send a proper command for the label to be able to authenticate without using a proper encryption key or password.

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Gelbman* (US 20020167500 A1) in view of *Teicher et al.* (US 5880449 A). *Gelbman*'s teachings have been discussed above.

Re claim 12, *Gelbman* does not disclose communication means are arranged to receive from the at least one handheld device information regarding a unique identity of the handheld device and communicate this information to the central unit, to enable selection of information to communicate to the handheld device in dependence of said unique identity

*Teicher*<sup>499</sup> discloses an electronic shelf label system in which the communication means connected to the central unit are arranged to receive from the at least one handheld device information regarding a unique identity (i.e. from register 58) of the handheld device and communicate this information to the central unit, to enable selection of information to communicate to the handheld device in dependence of said unique identity (*Teicher et al.*, col. 4 line 65-col. 5 line 2, col. 5 lines 16-22, col. 6 lines 10-21, col. 8 lines 15-28, col. 9 line 63-col. 10 line 5: the central unit 12 receives identity of handheld device 22 through check-in unit 16 and then selects a subset of record of price reduction list 70 for transmission to the device 22).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify *Gelbman* and assign an identity to each handheld device for communicating to the central unit as taught in *Teicher et al.*

One of ordinary skill in the art would be motivated to employ the teachings of *Teicher et al.* since they would enable the central unit selecting a subset of records, rather than the entire database, to the identified handheld unit that is to communicate with a certain group of shelf labels for performing functions including price verification or updating. Furthermore, by

receiving the identity of the specific handheld device that needs information from the central unit, the need to transmit or broadcast information from the central unit to other devices that do not need such information is eliminated thereby at least saving energy in the transmission and receiving.

### **Remarks**

Applicant's arguments have been fully considered but they are not persuasive.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, the prior art including *Goodwin*, *Teicher*'813, and *Teicher*'499 have been shown to teach authorization code to be sent to the label and handheld controller comprises a memory to hold at least an authorization code to match with the labels and with that entered by a personnel user. The prior art as cited further teaches the central host as the main authoritative source of information for providing and programming coded information to both the handheld devices and labels. Thus, providing the authorization code to the handheld devices would also be considered as an obvious extension of the teachings by the prior art as shown in *Teicher*'813 and discussed above.

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THIEN T. MAI whose telephone number is (571)272-8283. The examiner can normally be reached on Monday through Friday, 8:00 - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve S. Paik can be reached on 571-272-2404. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thien T Mai/  
Examiner, Art Unit 2887

/Thien M. Le/  
Primary Examiner, Art Unit 2887